



## Projections of occupational employment, 2016–26

The U.S. Bureau of Labor Statistics (BLS) projects employment for more than 800 detailed occupations. The projections are especially useful if you're interested in advising others about careers or if you'd like to know what to expect in terms of employment growth, required education for entry, and wages for certain occupations. This article presents the 2016–26 occupational employment projections in 14 charts.

Charts 1 and 2 highlight occupations that are projected to have the fastest growth or the most new jobs over the 2016–26 decade. Chart 3 shows the occupations that are projected to have the largest number of openings in each year of the decade, on average, for workers who are entering the occupation. Chart 4 shows the occupations that are expected to have the most job losses.

Overall employment is projected to grow by about 7 percent between 2016 and 2026. The dotted vertical line in [chart 1](#) shows this overall growth rate. To understand the differences between growth rate (percent) and growth in new jobs (numeric), see the following video about understanding the data.



In addition to illustrating the projections data, these charts present the education, experience, and training typically required to enter and become competent in each occupation. [Charts 5 through 14](#) show projected numeric growth and occupational openings (annual averages) by the typical education that workers need to enter an occupation.

Each chart also includes data for 2016 median annual wages, the point at which half of the workers earned more than the amount and half earned less. In May 2016, the median annual wage for all workers (excluding the self-employed) was \$37,040. More information about wage data is available at the [end of this article](#).

## Growth in occupations overall

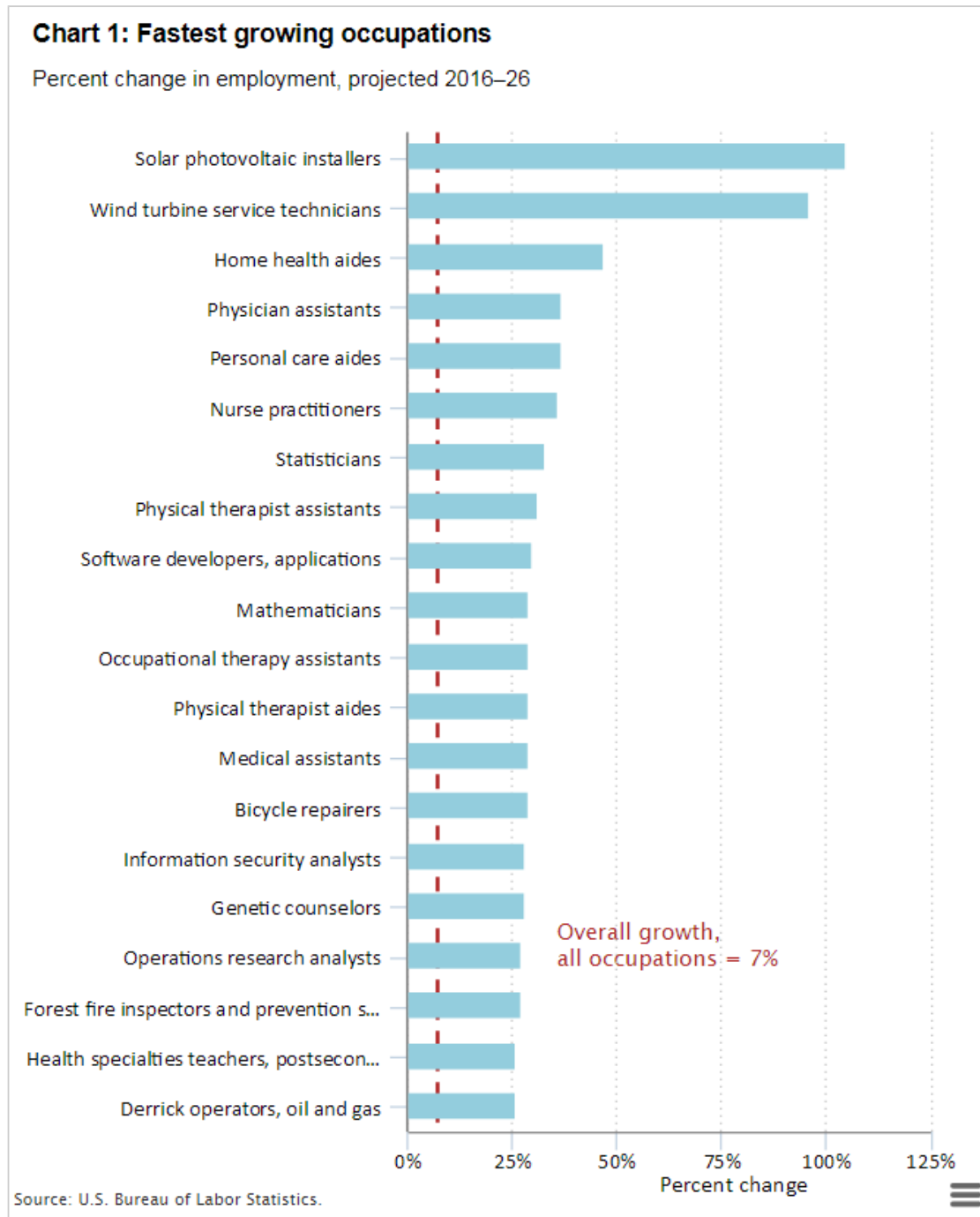
Rate of growth, number of new jobs, and number of occupational openings are different measures of projected employment.

- Some occupations that are projected to grow rapidly have a relatively small number of jobs, as is the case with solar photovoltaic installers and wind turbine service technicians. These small, fast-growing occupations may not have many new jobs.
- Some large occupations that are projected to have average or slow employment growth, such as childcare workers and retail salespersons, may have many new jobs.
- Similarly, large occupations are more likely than small ones to have many projected openings, shown as annual averages. This is true regardless of their projected rate of growth; in fact, even occupations that are projected to decline in employment will still have openings.

## Fastest growing occupations

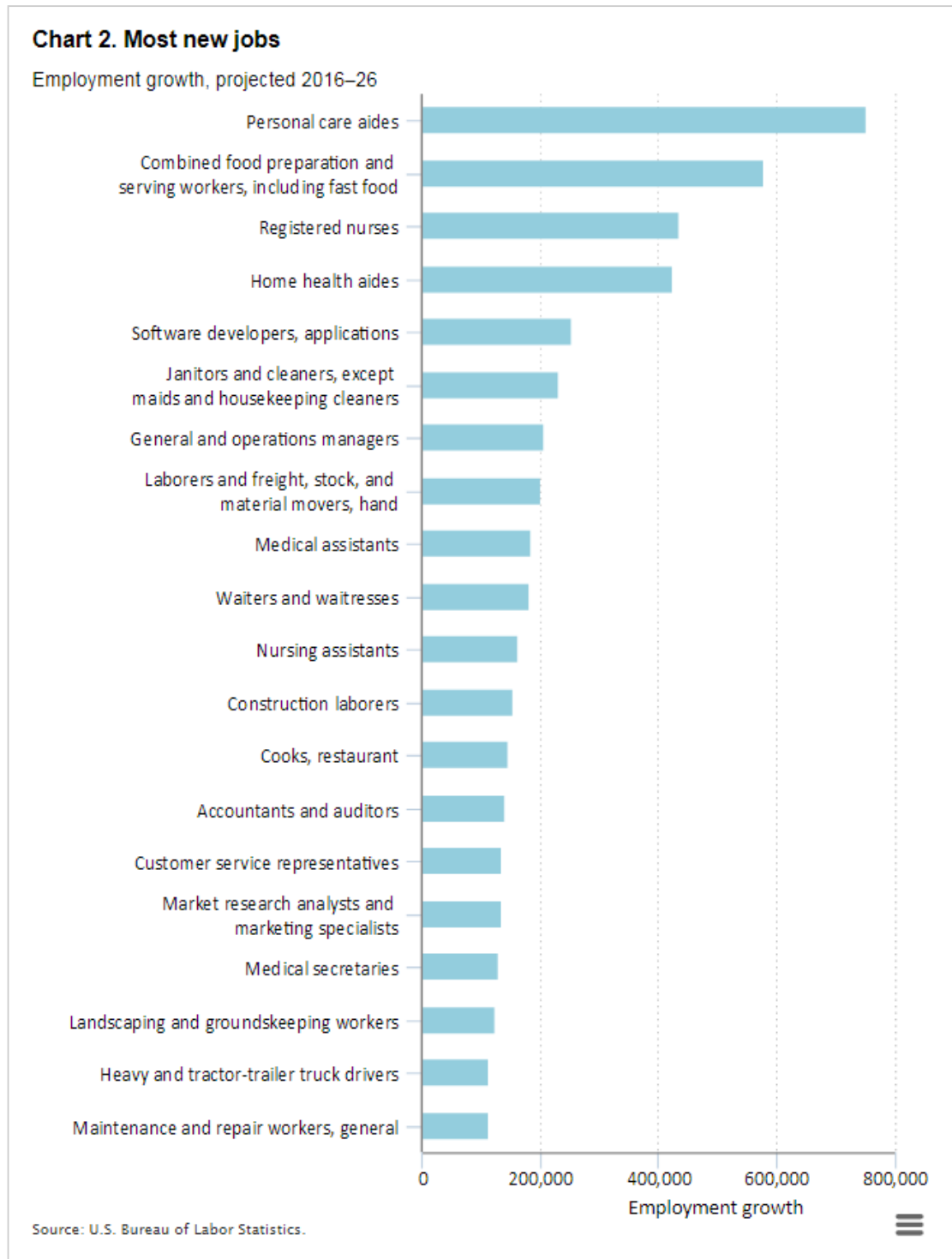
Employment in the fastest growing occupations is projected to increase at a rate that is at least triple that for all occupations. (See chart 1.)





## Most new jobs

Together, the 20 occupations in chart 2 are expected to add about 4.8 million jobs. That's more than 40 percent of the 11.5 million total new jobs projected for all occupations.



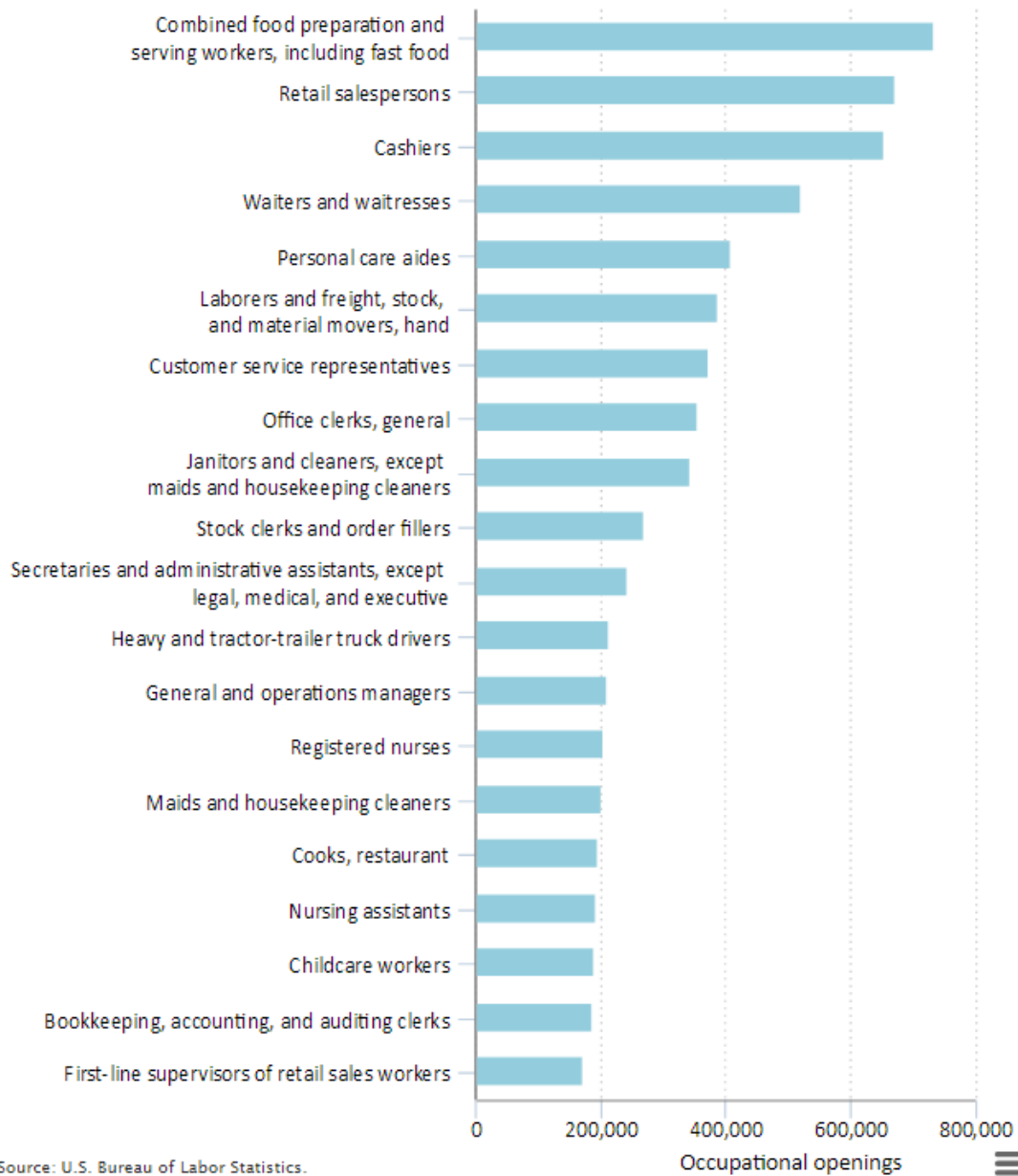
## Most occupational openings

The occupations in chart 3 are all expected to provide well over 100,000 openings per year for workers entering the occupation. Most of these occupational openings come from the need to replace workers who retire or separate for other reasons, rather than from the need to fill newly created jobs.



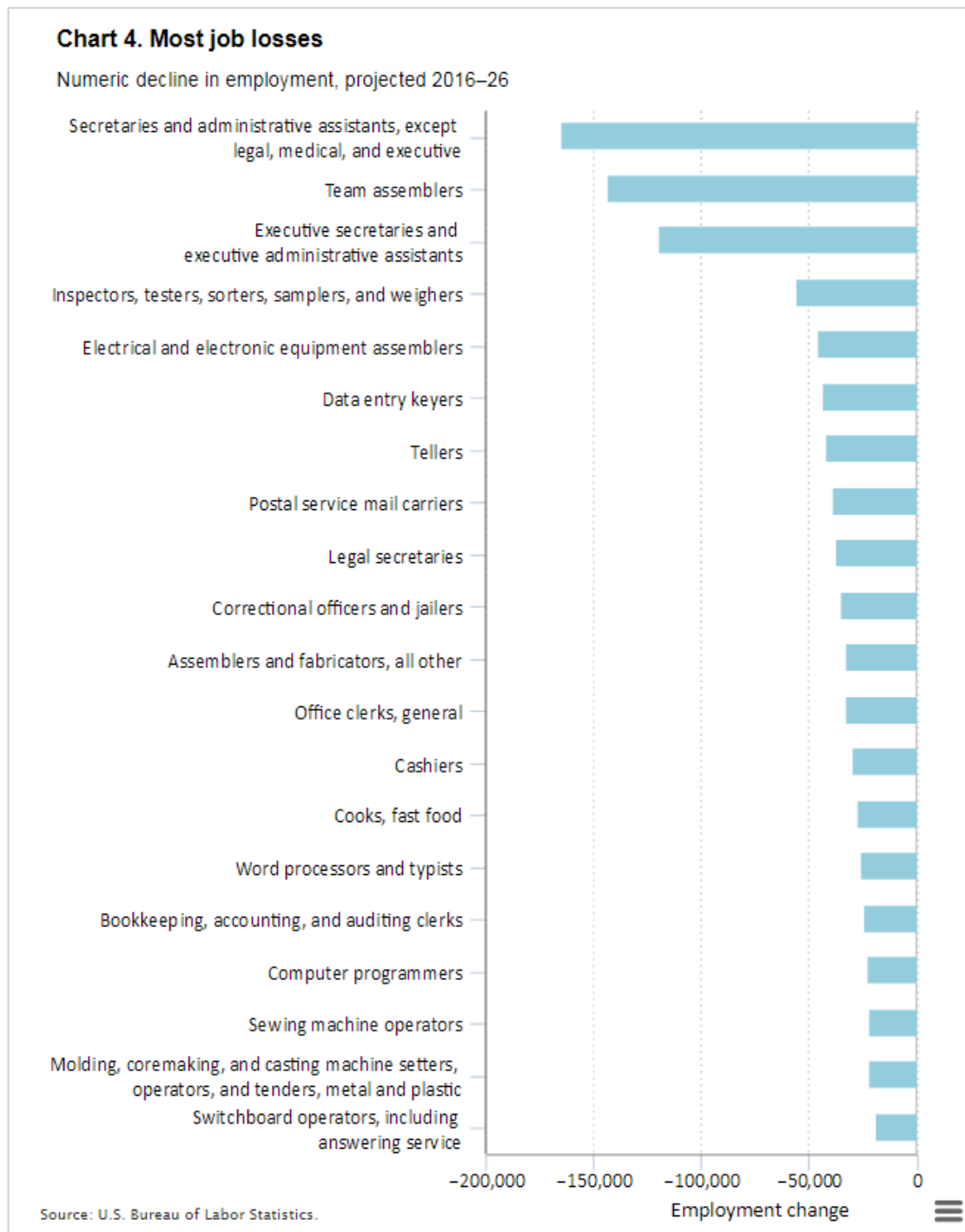
**Chart 3. Most occupational openings**

Occupational openings, projected 2016–26 annual average



## Most job losses

Occupations related to office support dominate the list of projected job losses over the decade, as workers increasingly do administrative tasks themselves. (See chart 4.)



## Growth in occupations by education typically required

The charts in this section are grouped by the typical education that workers need to enter an occupation. They also include information about the work experience and training usually required. (Hover over the bars to see this additional information.) As with chart 2, the charts in this section showing most new jobs highlight the occupations in each group that are projected to have the most numeric growth between 2016 and 2026. And as

with chart 3, the charts showing most openings highlight occupations in each group that are projected to provide the most openings annually, on average, for workers entering the occupation.

Note that these education groups focus on usual requirements at the entry level; in any occupation, some workers may have more or less education, experience, and training than what is typical to qualify and become competent in it. [Definitions](#) for these categories are available from the BLS [Employment Projections](#) program.

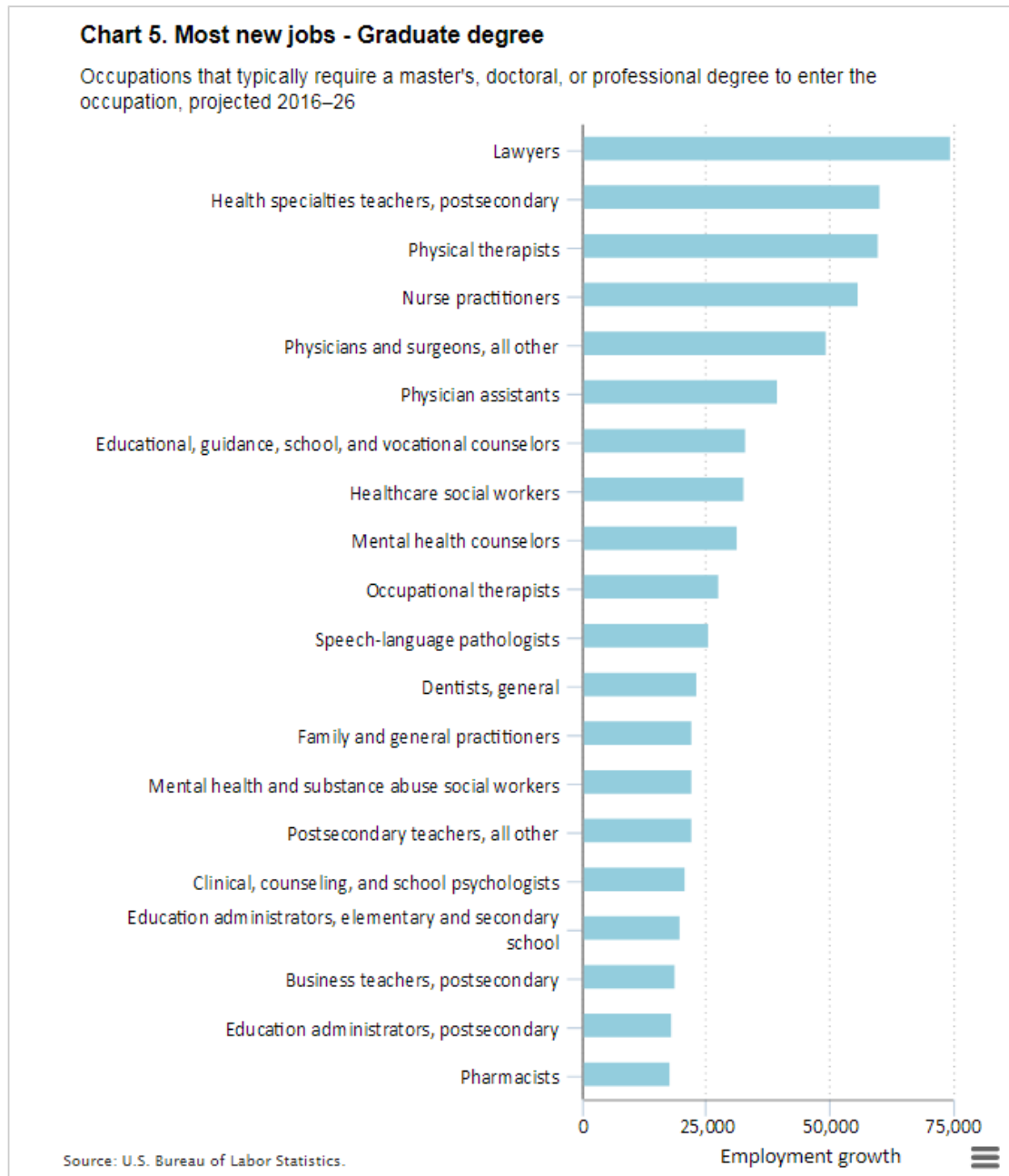


## Doctoral, professional, or master's degree

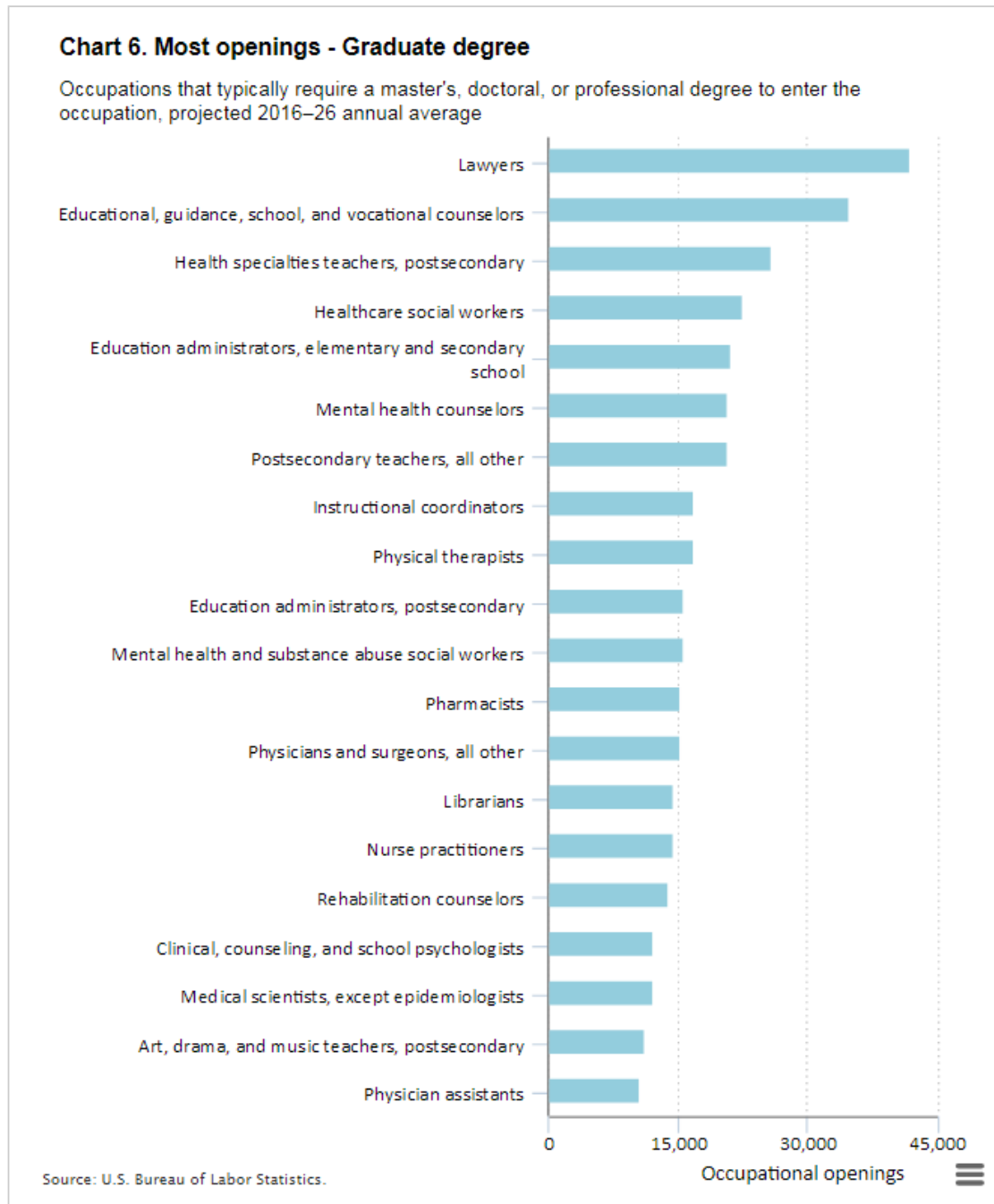
Completion of a doctoral or professional degree (such as a Ph.D. or J.D.) usually requires at least 3 years of academic study beyond a bachelor's degree. Completion of a master's degree usually requires 1 to 2 years of full-time academic study beyond a bachelor's degree.

**Most new jobs.** All of the occupations that typically require a graduate degree to enter and are projected to add the most jobs had median annual wages that were higher than the median annual wage for all occupations. In most, the wage was at least double the median annual wage for all occupations. (Hover over bars in chart 5.)





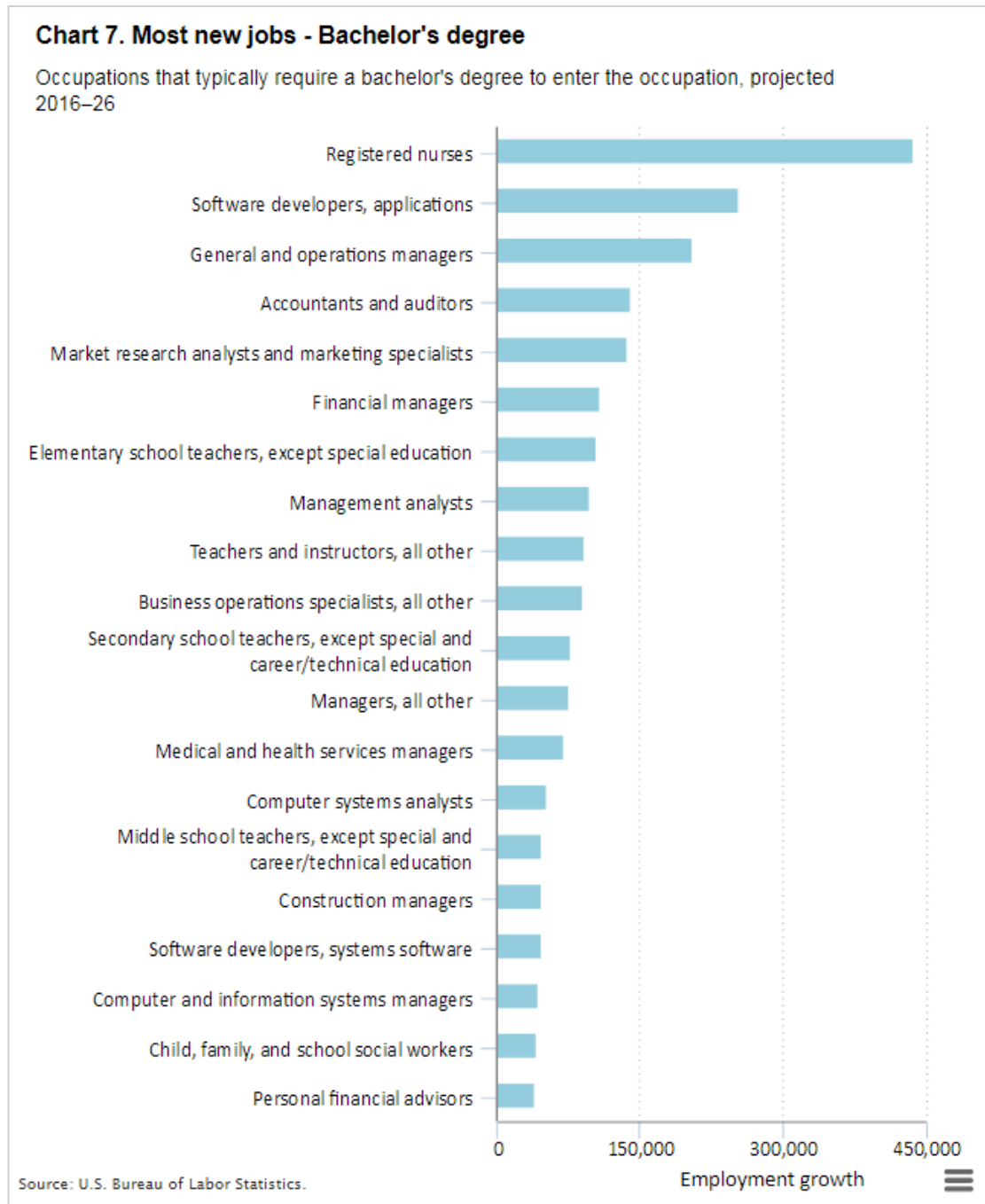
**Most openings.** In addition to requiring a graduate degree, some of the occupations shown in chart 6 typically require related experience to enter; others usually require an internship or residency to attain competency. (Hover over bars in chart 6.)



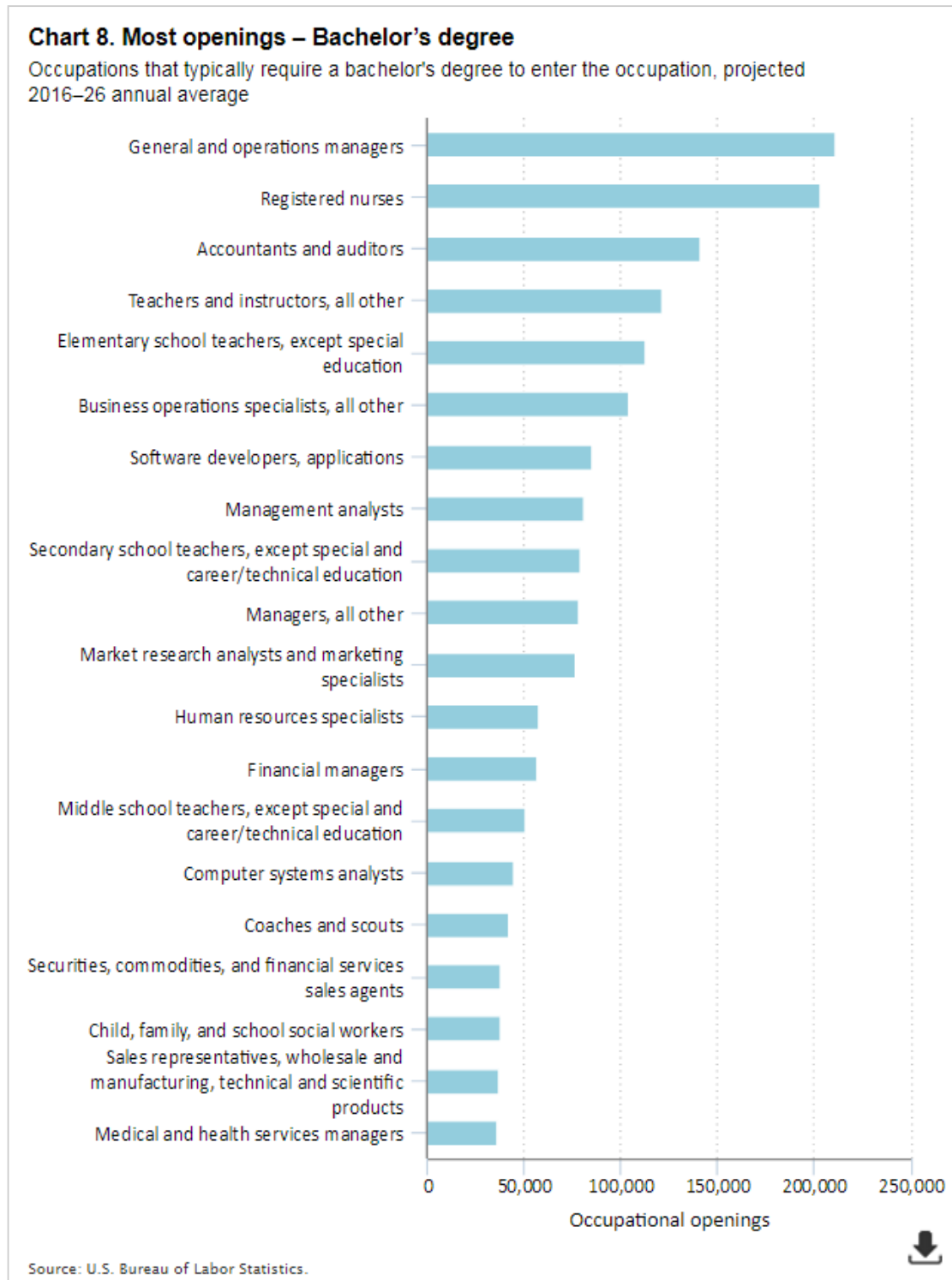
## Bachelor's degree

Completion of a bachelor's degree usually requires at least 4, but not more than 5, years of full-time academic study beyond high school.

**Most new jobs.** Except for teachers and instructors, all other, each of the occupations that typically requires a bachelor's degree to enter and is projected to add the most jobs had a median annual wage that was higher than the median annual wage for all occupations. (Hover over bars in chart 7.)



**Most openings.** In addition to requiring a bachelor's degree, some of the occupations shown in chart 8 typically require related experience to enter or on-the-job training to attain competency. (Hover over bars in chart 8.)



## Associate's degree or postsecondary nondegree award

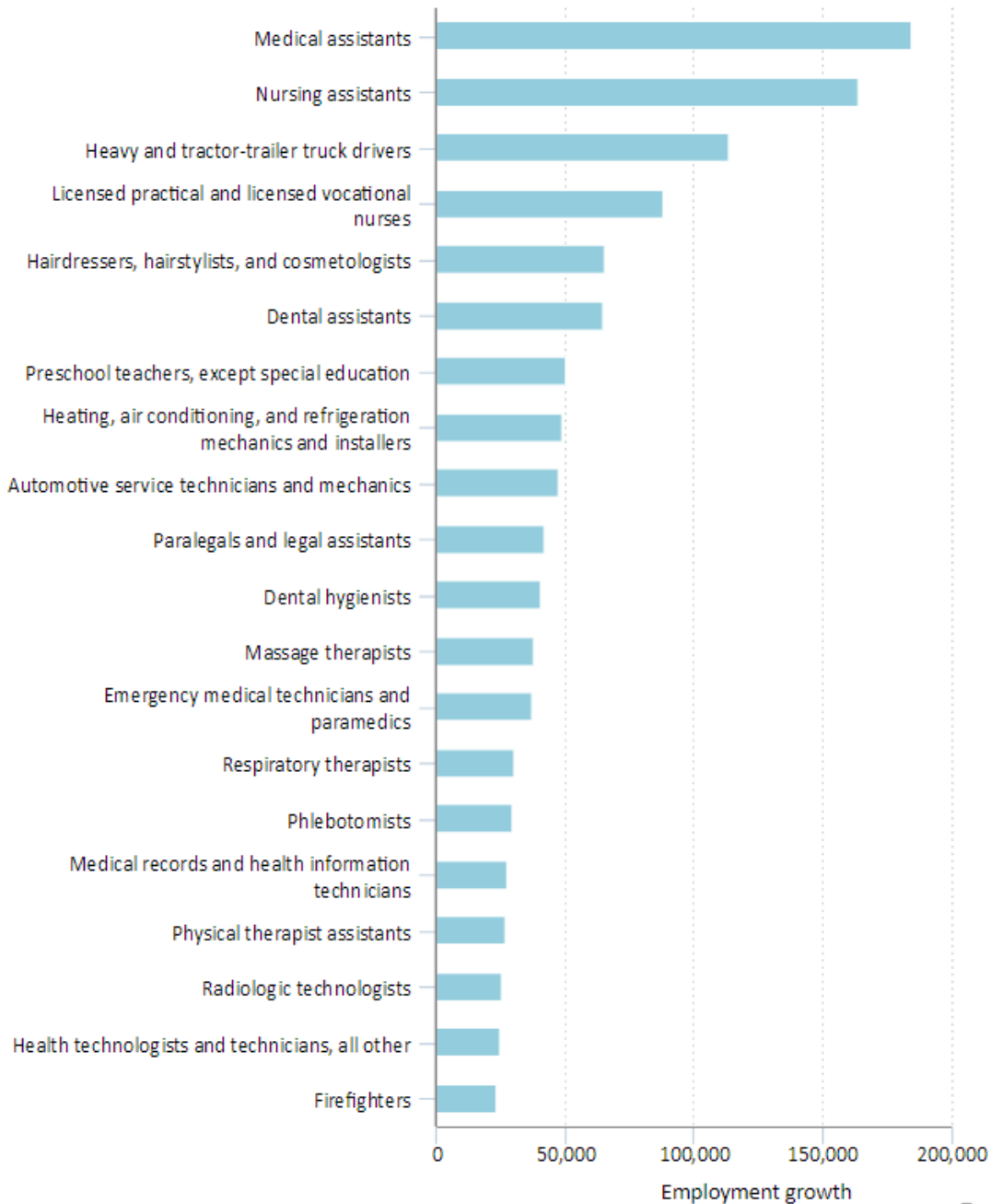
Completion of an associate's degree usually requires at least 2, but not more than 4, years of full-time academic study beyond high school. Postsecondary nondegree programs lead to a certificate or other award, but not a degree, and may be completed in a few weeks or last up to 2 years.



**Most new jobs.** Most of the occupations that typically require an associate's degree or postsecondary nondegree award to enter and are projected to add the most jobs had median annual wages that were higher than the median annual wage for all workers. (Hover over bars in chart 9.)

**Chart 9: Most new jobs – Associate's degree or postsecondary nondegree award**

Occupations that typically require an associate's degree or postsecondary nondegree award to enter the occupation, projected 2016–26

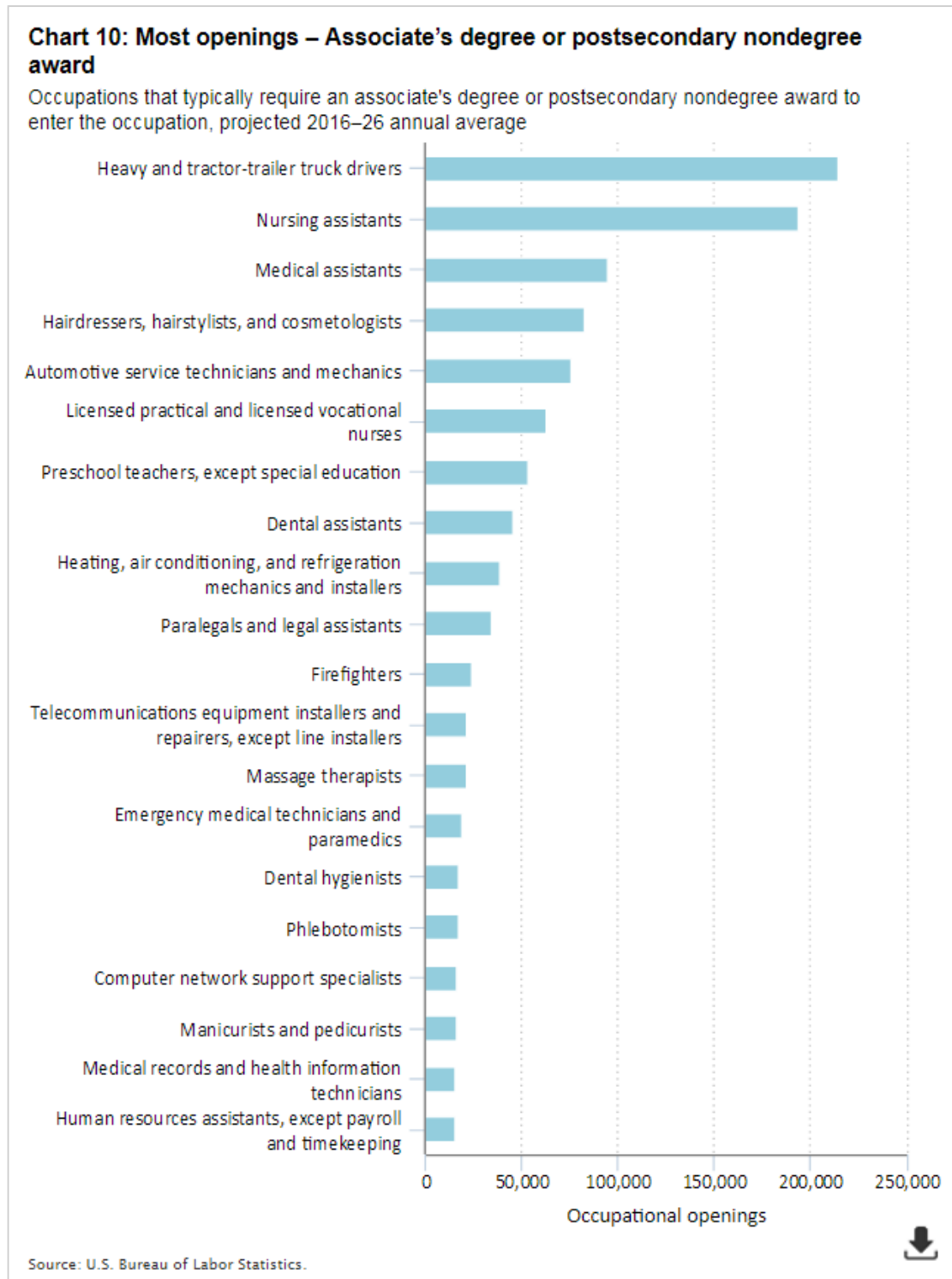


Source: U.S. Bureau of Labor Statistics.



**Most openings.** To enter any of the occupations in chart 10 typically requires either an associate's degree or postsecondary nondegree award, but none requires related experience. However, some typically require on-the-job training to attain competency. (Hover over bars in chart 10.)

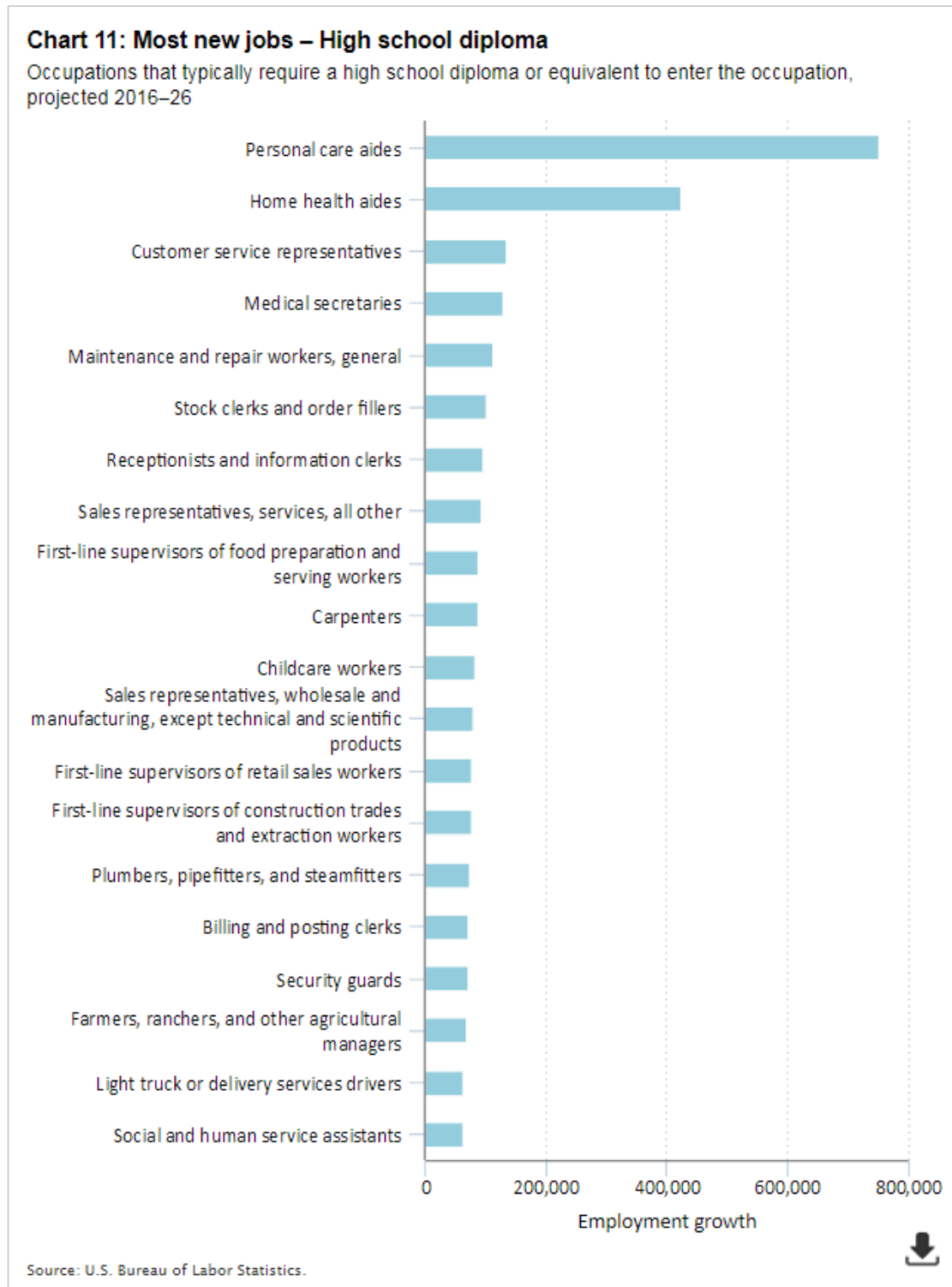




## High school diploma

This category indicates completion of a high school diploma or equivalent, such as the General Education Development (GED) credential.

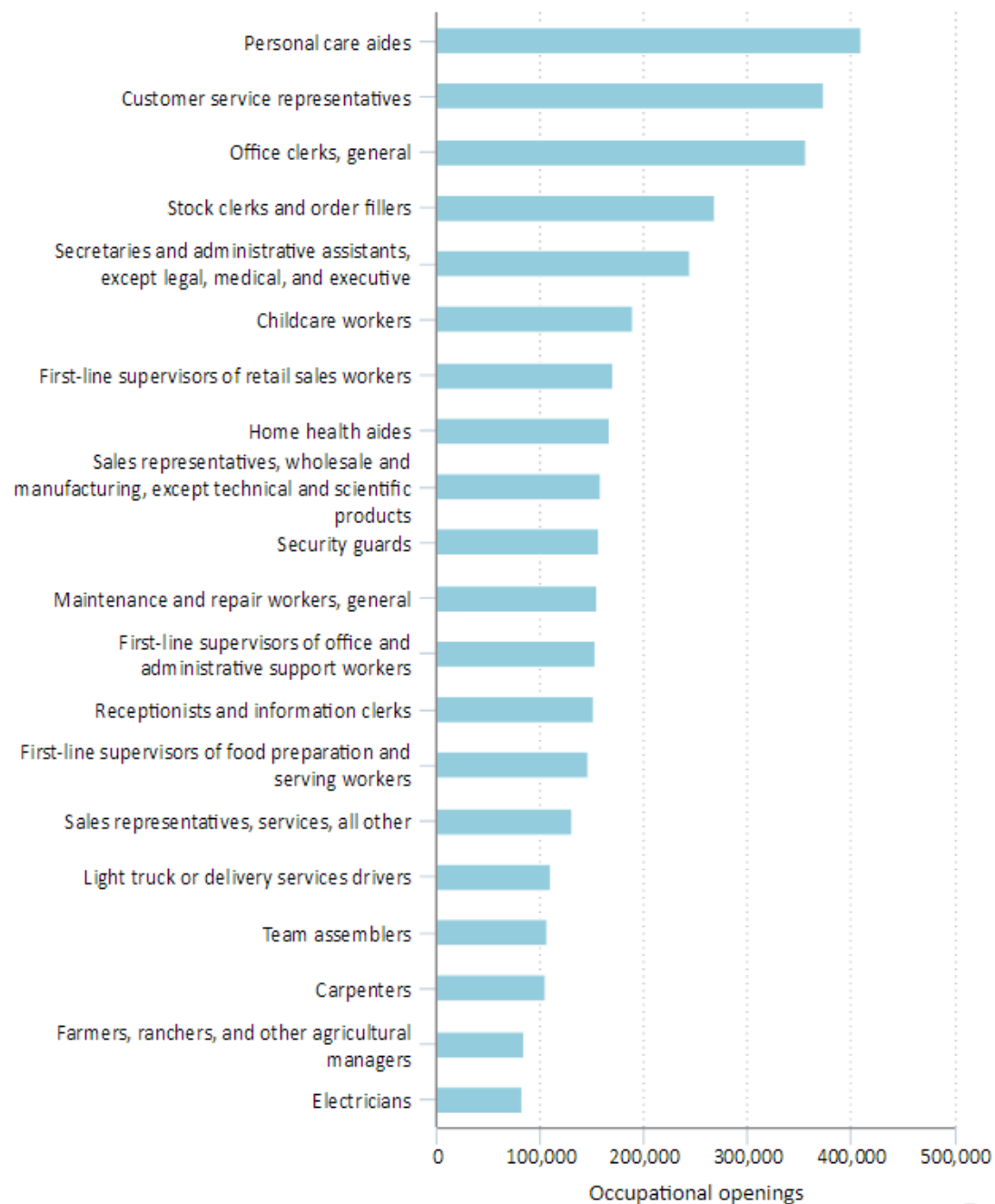
**Most new jobs.** Some of the occupations that typically require a high school diploma to enter and are projected to add the most jobs had median annual wages that were higher than the median annual wage for all workers. (Hover over bars in chart 11.)



**Most openings.** In addition to requiring a high school diploma, all of the occupations shown in chart 12 typically require either related experience to enter or on-the-job training to attain competency. (Hover over bars in chart 12.)

**Chart 12: Most openings – High school diploma**

Occupations that typically require a high school diploma to enter the occupation, projected 2016–26 annual average



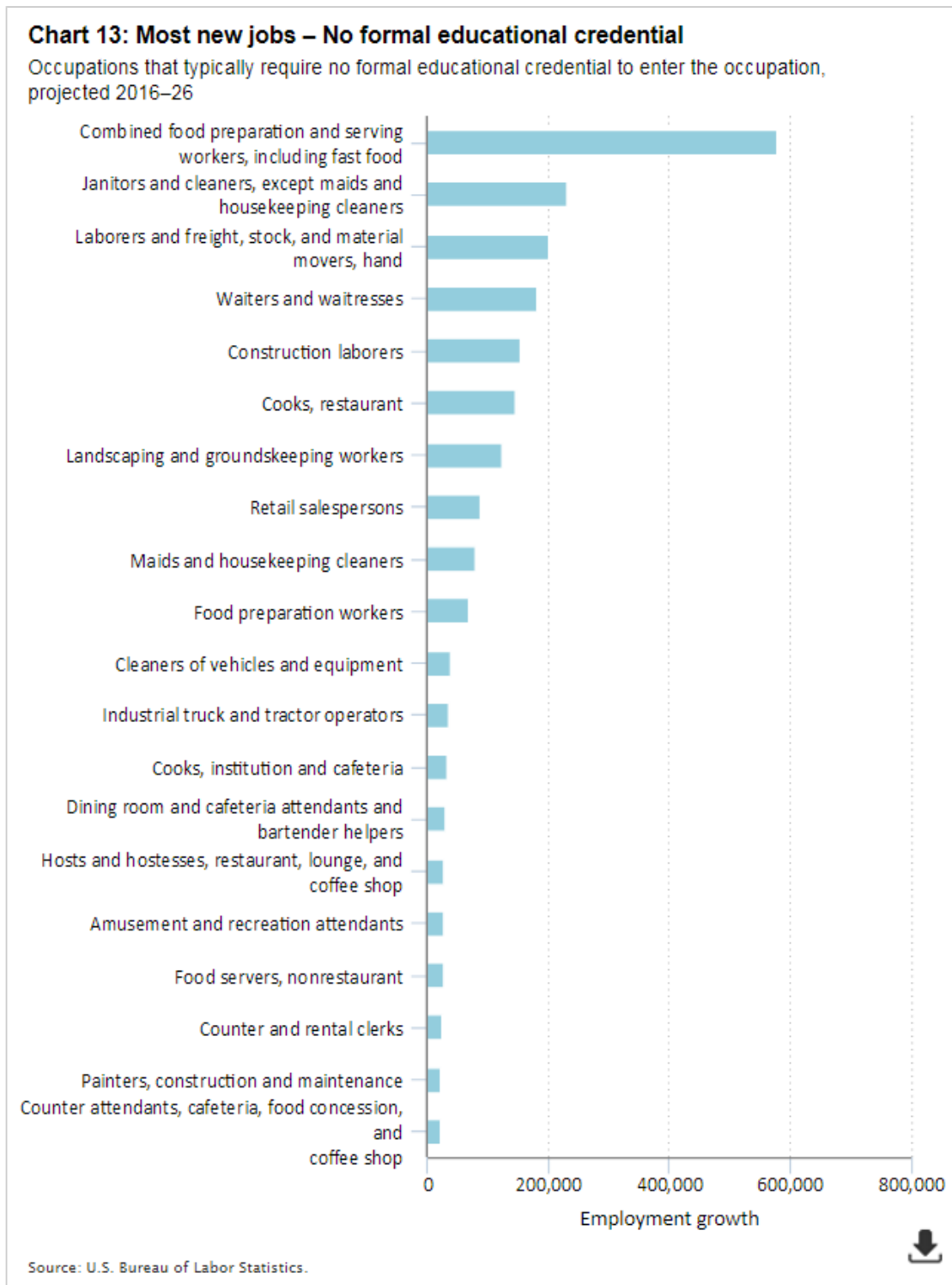
Source: U.S. Bureau of Labor Statistics.



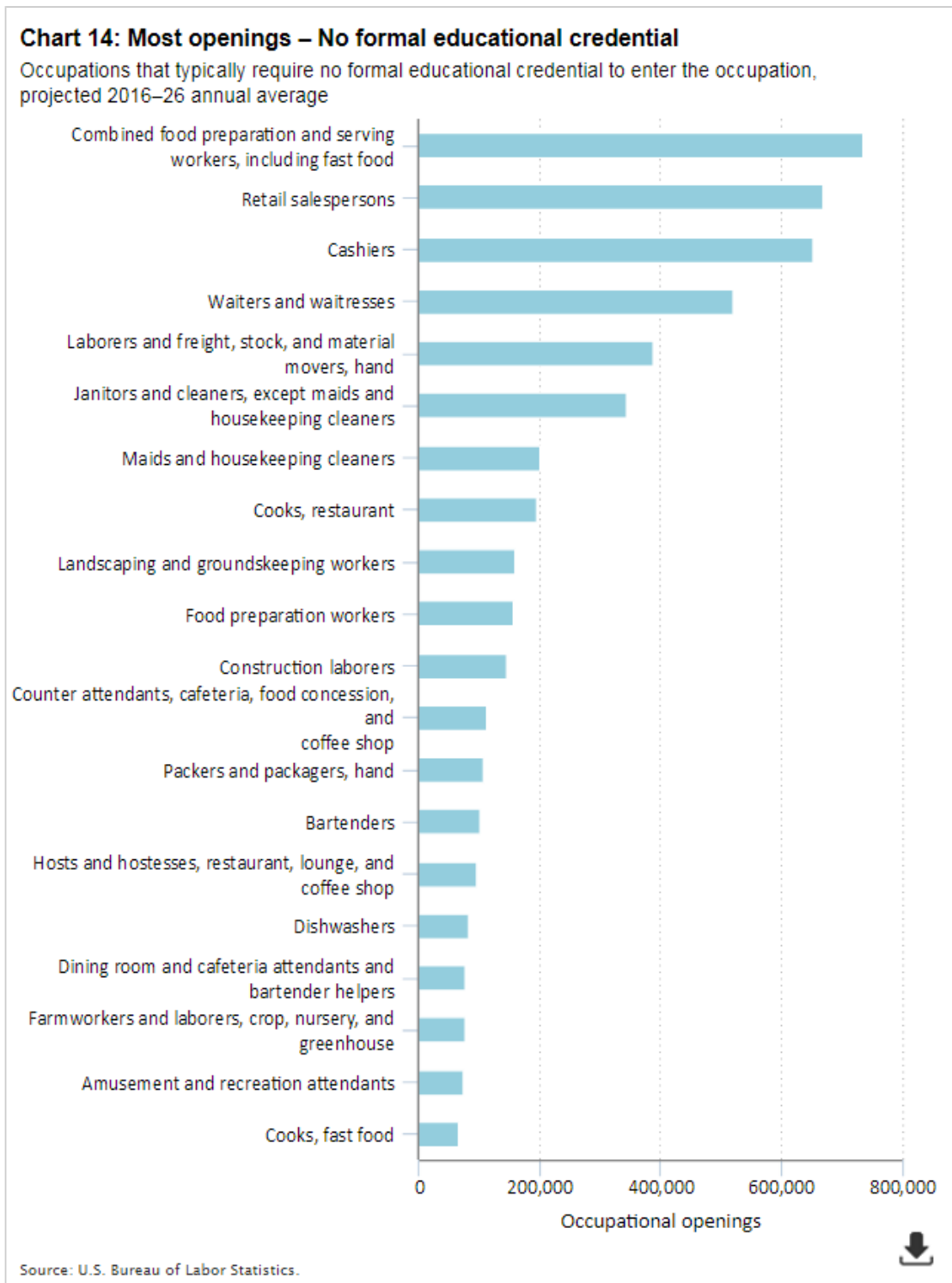
## No formal educational credential

This category indicates that a formal credential issued by an educational institution, such as a high school diploma or postsecondary certificate, is not typically needed to enter the occupation.

**Most new jobs.** Of occupations that typically do not require a formal educational credential to enter and are projected to add the most jobs, construction and maintenance painters is the only one that had a median annual wage higher than the median annual wage for all workers. (Hover over bars in chart 13.)



**Most openings.** Although the occupations shown in chart 14 typically do not require a formal educational credential for entry, all require on-the-job training to attain competency; restaurant cooks also need related experience to enter the occupation. (Hover over bars in chart 14.)



## How BLS develops the projections

Every 2 years, BLS releases projections of the labor force, the overall economy, industry employment, and occupational employment. Economists in the BLS Office of Occupational Statistics and Employment Projections develop these data in a number of steps, first analyzing broad trends and then examining several hundred industries and occupations.



### Population and labor force

Using population projections from the [U.S. Census Bureau](#), BLS analyzed how much the U.S. population and labor force are expected to grow over the 2016–26 decade. BLS then produced projections of the labor force—the civilian, noninstitutional population ages 16 and older that is working or actively seeking work—by looking at historical trends in labor force participation for each age, gender, and race or ethnic group.

### Overall economy

BLS then created a model of an economy that is operating at full potential, given the labor force and several other factors. Using this framework, BLS estimated the dollar value of each industry's total output of goods or services. Some of these goods and services are sold to other industries; for example, corn is used in making cereal. Other output, such as the cereal itself or grocery delivery services, is sold directly to consumers.

### Industry employment

BLS also studied trends in productivity—the amount of output produced per hour of work. Because of technological advances, for example, some industries are able to increase output without increasing the number of hours worked by employees. BLS used this information to translate projected output into the number of jobs that each industry needs to produce its goods and provide its services.



## Occupational employment

Next, BLS projected how jobs in industries are expected to be distributed across detailed occupations, using 2016 employment data from the BLS [Occupational Employment Statistics](#) (OES) survey and information from other sources for sectors not covered by the survey.

BLS then analyzed how the distribution is likely to change over the 2016–26 decade, studying trends in technology, changing skill requirements, and other factors. And because employment trends in most occupations are closely tied to trends in particular industries, BLS used this information to project employment by occupation, to 2026.

## A word about wages

The charts in this article include wage data from OES. Wages include hourly, weekly, or annual pay that people receive for the work that they do. Sales commissions, tips, and production bonuses also are part of the wages shown in these charts, but overtime pay and nonproduction bonuses are not.

For occupations with a median annual wage of at least \$208,000 in May 2016, a specific wage is not shown because the OES survey does not publish wage data above that amount. In these cases, the charts show that the median wage was greater than or equal to ( $\geq$ ) \$208,000.

Wages in these charts are for wage and salary workers only. Self-employed workers are not included in these estimates.

For a different presentation of projections and wage data by occupation, see the [Occupational Outlook Handbook](#).

### SUGGESTED CITATION:

"Projections of occupational employment, 2016–26," *Career Outlook*, U.S. Bureau of Labor Statistics, October 2017.

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